



PATENT ABSTRACTS OF JAPAN

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SCIENCE & TECHNOL**(72) Inventor: **HIRO KAZUO
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KAWAHARA AKINOBU****(54) METHOD FOR MEASURING COMBINED AMOUNT
OF NITRATE NITROGEN AND NITRITE NITROGEN****(57) Abstract:**

PURPOSE: To accurately calculate nitrogen content, by calculating wavelengths absorbing specific ultraviolet rays with respect to two kinds of standard specimens respectively individually containing nitrate nitrogen and nitrite nitrogen and measuring the ultraviolet absorption of a specimen to be measured on the basis of the calculated wavelengths.

CONSTITUTION: Ultraviolet absorption spectra A, B are measured with respect to standard specimens respectively individually containing nitrate nitrogen and nitrite nitrogen, for example, in an amount of 0.1ppm and wavelengths λ_2, λ_3 wherein the differences $(E_{21}-E_{22}), (E_{31}-E_{32})$ of respective absorbancies of the spectra A, B become equal, are calculated. For example, the difference E_2-E_3 of absorbancies at $\lambda_2=223\text{nm}$ and $\lambda_3=232\text{nm}$ comes to 0.14. Absorbancies at wavelengths λ_2, λ_3 are measured with respect to a specimen to be measured to calculate the difference $E_2'-E_3'$ of absorbancies. The difference $E_2'-E_3'$ of absorbancies and the difference E_2-E_3 of absorbancies are proportional to nitrogen content. Therefore, the total nitrogen content in a solution mixture containing

nitrate nitrogen and nitrite nitrogen can be accurately calculated from the absorbancy measurement of the wavelengths λ_2, λ_3 and this method is useful for the monitoring of environmental contamination.

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